

WHAT IS CLAIMED IS:

1. A purified nuclear matrix protein that is present in normal renal cells but absent in cancerous renal cells, or that is absent in normal renal cells but present in cancerous renal cells.

2. The protein or fragment as claimed in claim 1, wherein the protein is RCNL-1.

3. The protein or fragment of claim 1, wherein the protein is selected from the group consisting of RCCA-1, RCCA-2, RCCA-3, RCCA-4, and RCCA-5.

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4. A purified polynucleotide sequence encoding a protein or fragment of claim 1.

5. A purified polynucleotide sequence which hybridizes to the polynucleotide sequence of claim 4.

6. A host cell transformed with the polynucleotide of claim 4.

7. A recombinant expression vector containing the polynucleotide of claim 4.

8. The vector of claim 7, wherein the vector is a virus.

9. The vector of claim 8, wherein the virus is an RNA virus.

10. The vector of claim 9, wherein the RNA virus is a retrovirus.

11. The vector of claim 7, wherein the vector is a liposome.

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12. The vector of claim 11, wherein the liposome is target- specific.

13. The vector of claim 12, wherein the liposome is targeted with an antibody.

14. The vector of claim 7, wherein the vector is a plasmid.

SD A3 15. An antibody which binds to the protein of claim 1.

16. A method for detecting a cell proliferative disorder in a subject, comprising contacting a cellular component from the subject with a reagent which binds to a cellular component associated with a cell proliferative disorder.

17. The method of claim 16, wherein the cellular component is taken from the subject's kidney.

SD A4 18. The method of claim 17, wherein the cellular component is nucleic acid.

19. The method of claim 18, wherein the nucleic acid is DNA.

20. The method of claim 18, wherein the nucleic acid is RNA.

21. The method of claim 17, wherein the cellular component is protein.

SD A5 22. The method of claim 16, wherein the reagent is a probe.

23. The method of claim 22, wherein the probe is nucleic acid.

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24. The method of claim 22, wherein the probe is an antibody.

25. The method of claim 24, wherein the antibody is polyclonal.

26. The method of claim 24, wherein the antibody is monoclonal.

27. The method of claim 22, wherein the probe is detectably labeled.

28. The method of claim 27, wherein the label is selected from the group consisting of a radioisotope, a bioluminescent compound, a chemiluminescent compound, a fluorescent compound, a metal chelate, and an enzyme.

29. A method of treating a cell proliferative disorder associated with a protein selected from the group consisting of RCCA-1, RCCA-2, RCCA-3, RCCA-4, RCCA-5, and RCNL-1, comprising administering to a subject with the disorder a therapeutically effective amount of reagent which blocks or enhances the function of the protein.

30. The method of claim 29, wherein the reagent is an antisense polynucleotide sequence.

31. The method of claim 29, wherein the reagent is a polynucleotide sequence encoding a protein selected from the group consisting of RCCA-1, RCCA-2, RCCA-3, RCCA-4, RCCA-5, and RCNL-1.

32. The method of claim 29, wherein the reagent is an antibody.

33. The method of claim 32, wherein the antibody is monoclonal.

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SUB B5

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Cont

34. The method of claim 29, wherein the cell proliferative disorder is in renal tissue.

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35. A method of gene therapy, comprising introducing into the cells of a host subject an expression vector comprising a nucleotide sequence encoding a protein of claim 1.

36. The method of claim 35, wherein the expression vector is introduced into the cells of the host subject ex vivo, yielding transformed cells, and the transformed cells then are reintroduced into the subject.

37. The method of claim 36, wherein the expression vector is an RNA virus.

38. The method of claim 37, wherein the RNA virus is a retrovirus.

39. The method of claim 36, wherein the subject is human.

40. A method for identifying a composition which blocks or enhances the function of an NMP of renal cells, which method comprises:

- (a) incubating NMP-containing renal cells with a test composition under conditions that allow the renal cells and test composition to interact,

and then

- (b) measuring whether the test composition causes blocking or enhancement of the function of an NMP of the renal cells.

41. The method of claim 40, wherein the NMP is selected from the group consisting of RCCA-1, RCCA-2, RCCA-3, RCCA-4, RCCA-5, and RCNL-1.

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42. The method of claim 40, wherein the effect being measured is blocking of the function of the NMP.

43. The method of claim 40, wherein the effect being measured is enhancement of the function of the NMP.

44. A kit useful for the detection of a cell-proliferative disorder associated with a protein of claim 1, said kit comprising a probe for identifying a protein or fragment of claim 1 or a polynucleotide sequence encoding a protein or fragment of claim 1.

45. The kit of claim 44, wherein the probe is an antibody capable of binding to the protein or fragment.

46. The kit of claim 44, wherein the probe is a polynucleotide probe capable of hybridizing with the polynucleotide sequence encoding the protein or fragment.

47. The kit of claim 46, further comprising a container containing an oligonucleotide primer for amplification of the polynucleotide sequence encoding the protein or fragment.

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